

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An ink-jet printer comprising:
a carriage, which is rotatably installed on a guide shaft and includes a stacking portion on a first side of said guide shaft on which an ink cartridge is stacked, and a balancing portion installed on a side of said guide shaft opposite to the stacking portion, so as to move in a straight reciprocating motion along the guide shaft; and
a head gap adjusting apparatus, which is rotatably installed in the balancing portion and adjusts a head gap by rotating the carriage centering on the guide shaft according to a thickness of a printing medium.
2. (original) The ink-jet printer of claim 1, wherein the head gap adjusting apparatus comprises:
a body;
a cam portion, which is provided on one end of the body and in which a cam radius having a predetermined shape is formed;
a guide portion, which is provided on the other end of the body and is bent at a predetermined angle; and
a support portion, which is provided on a side opposite to a surface in which the guide portion is formed while protruding from the body.
3. (original) The ink-jet printer of claim 2, wherein the cam portion and the guide portion protrude from the body.
4. (original) The ink-jet printer of claim 2, wherein the cam portion and the guide portion are formed on the same surface as the body.

5. (original) The ink-jet printer of claim 2, wherein a space portion having a predetermined height is formed between the cam portion and the guide portion.

6. (currently amended) [The ink-jet printer of claim 2,] An ink-jet printer comprising:

a carriage, which is rotatably installed on a guide shaft and includes a stacking portion on which an ink cartridge is stacked, and a balancing portion installed on a side opposite to the stacking portion, so as to move in a straight reciprocating motion along the guide shaft; and

a head gap adjusting apparatus, which is rotatably installed in the balancing portion and adjusts a head gap by rotating the carriage centering on the guide shaft according to a thickness of a printing medium;

wherein the head gap adjusting apparatus comprises:

a body;

a cam portion, which is provided on one end of the body and in which a cam radius having a predetermined shape is formed;

a guide portion, which is provided on the other end of the body and is bent at a predetermined angle;

a support portion, which is provided on a side opposite to a surface in which the guide portion is formed while protruding from the body; and

[wherein the head gap adjusting apparatus further comprises] an elastic unit which supports the head gap adjusting apparatus, one end of the elastic unit being supported by the carriage and the other end thereof being supported by the support portion.

7. (currently amended) [The ink-jet printer of claim 2,] An ink-jet printer comprising:

a carriage, which is rotatably installed on a guide shaft and includes a stacking portion on which an ink cartridge is stacked, and a balancing portion installed on a side opposite to the stacking portion, so as to move in a straight reciprocating motion along the guide shaft; and

a head gap adjusting apparatus, which is rotatably installed in the balancing portion and adjusts a head gap by rotating the carriage centering on the guide shaft according to a thickness of a printing medium;

wherein the head gap adjusting apparatus comprises:

a body;

a cam portion, which is provided on one end of the body;

a guide portion, which is provided on the other end of the body and is bent at a predetermined angle; and

a support portion, which is provided on a side opposite to a surface in which the guide portion is formed while protruding from the body;

wherein the cam portion includes a first cam radius formed on a surface opposite to the guide portion and a second cam radius formed on a surface perpendicular to the first cam radius.

8. (original) The ink-jet printer of claim 7, wherein a curvature radius of the second cam radius is larger than that of the first cam radius.

9. (currently amended) [The ink-jet printer of claim 2,] An ink-jet printer comprising:

a carriage, which is rotatably installed on a guide shaft and includes a stacking portion on which an ink cartridge is stacked, and a balancing portion installed on a side opposite to the stacking portion, so as to move in a straight reciprocating motion along the guide shaft; and

a head gap adjusting apparatus, which is rotatably installed in the balancing portion and adjusts a head gap by rotating the carriage centering on the guide shaft according to a thickness of a printing medium;

wherein the head gap adjusting apparatus comprises:

a body;

a cam portion, which is provided on one end of the body and in which a cam radius having a predetermined shape is formed;

a guide portion, which is provided on the other end of the body and is bent at a predetermined angle;

a support portion, which is provided on a side opposite to a surface in which the guide portion is formed while protruding from the body; and

wherein both ends of the guide shaft are supported by a bracket, and a bent portion, which is bent to a predetermined height, is provided on one end of the bracket, and first and second stoppers are provided at a predetermined interval on a top surface of the bent portion, so as to contact the guide portion of the head gap adjusting apparatus.

10. (original) The ink-jet printer of claim 9, wherein the first stopper protrudes vertically from the top surface of the bent portion.

11. (original) The ink-jet printer of claim 9, wherein the second stopper protrudes in a closed trace shape from the top surface of the bent portion.

12. (original) The ink-jet printer of claim 10, wherein a printing section is located between the first and second stoppers.

13. (original) The ink-jet printer of claim 11, wherein a printing section is located between the first and second stoppers.

14. (original) The ink-jet printer of claim 9, wherein a height of the second stopper is lower than that of the first stopper and is less than a height of the space portion.

15. (currently amended) An ink-jet printer comprising:
a carriage, which is rotatably installed on a guide shaft and includes a stacking portion on a first side of said guide shaft on which an ink cartridge is stacked, and a balancing portion installed on a side of said guide shaft opposite to the stacking portion, so as to move in a straight reciprocating motion along the guide shaft;

a head gap adjusting apparatus, which is rotatably installed in the balancing portion and adjusts a head gap by rotating the carriage centering on the guide shaft according to a thickness of a printing medium; and

a bracket, which supports both ends of the guide shaft and on which a plurality of stoppers are provided so as to rotate the head gap adjusting apparatus while contacting the head gap adjusting apparatus.

16. (currently amended) [The ink-jet printer of claim 15,] An ink-jet printer comprising:

a carriage, which is rotatably installed on a guide shaft and includes a stacking portion on which an ink cartridge is stacked, and a balancing portion installed on a side opposite to the stacking portion, so as to move in a straight reciprocating motion along the guide shaft;

a head gap adjusting apparatus, which is rotatably installed in the balancing portion and adjusts a head gap by rotating the carriage centering on the guide shaft according to a thickness of a printing medium; and

a bracket, which supports both ends of the guide shaft and on which a plurality of stoppers are provided so as to rotate the head gap adjusting apparatus while contacting the head gap adjusting apparatus;

wherein a bent portion, which is bent to a predetermined height, is provided on one end of the bracket, and the stoppers include[s] a first stopper protruding vertically from the top surface of the bent portion, and a second stopper protruding in a closed trace shape from the top surface of the bent portion.

17. (original) The ink-jet printer of claim 16, wherein a printing section is located between the first and second stoppers.

18. (original) The ink-jet printer of claim 15, wherein the head gap adjusting apparatus comprises:
a body;

a cam portion, which is provided on one end of the body and in which a cam radius having a predetermined shape is formed;

a guide portion, which is provided on the other end of the body and is bent at a predetermined angle; and

a support portion, which is provided on a side opposite to a surface in which the guide portion is formed while protruding from the body.

19. (original) The ink-jet printer of claim 18, wherein a space portion having a predetermined height is formed between the cam portion and the guide portion.

20. (currently amended) [The ink-jet printer of claim 18,] An ink-jet printer comprising:

a carriage, which is rotatably installed on a guide shaft and includes a stacking portion on which an ink cartridge is stacked, and a balancing portion installed on a side opposite to the stacking portion, so as to move in a straight reciprocating motion along the guide shaft;

a head gap adjusting apparatus, which is rotatably installed in the balancing portion and adjusts a head gap by rotating the carriage centering on the guide shaft according to a thickness of a printing medium; and

a bracket, which supports both ends of the guide shaft and on which a plurality of stoppers are provided so as to rotate the head gap adjusting apparatus while contacting the head gap adjusting apparatus;

wherein the head gap adjusting apparatus comprises:

a body;

a cam portion, which is provided on one end of the body and in which a cam radius having a predetermined shape is formed;

a guide portion, which is provided on the other end of the body and is bent at a predetermined angle;

a support portion, which is provided on a side opposite to a surface in which the guide portion is formed while protruding from the body; and

[wherein the head gap adjusting apparatus further comprises] an elastic unit which supports the head gap adjusting apparatus, one end of the elastic unit being supported by the carriage and the other end thereof being supported by the support portion.

21. (currently amended) [The ink-jet printer of claim 18,] An ink-jet printer comprising:

a carriage, which is rotatably installed on a guide shaft and includes a stacking portion on which an ink cartridge is stacked, and a balancing portion installed on a side opposite to the stacking portion, so as to move in a straight reciprocating motion along the guide shaft;

a head gap adjusting apparatus, which is rotatably installed in the balancing portion and adjusts a head gap by rotating the carriage centering on the guide shaft according to a thickness of a printing medium; and

a bracket, which supports both ends of the guide shaft and on which a plurality of stoppers are provided so as to rotate the head gap adjusting apparatus while contacting the head gap adjusting apparatus;

wherein the head gap adjusting apparatus comprises:

a body;

a cam portion, which is provided on one end of the body;

a guide portion, which is provided on the other end of the body and is bent at a predetermined angle; and

a support portion, which is provided on a side opposite to a surface in which the guide portion is formed while protruding from the body; and

wherein the cam portion includes a first cam radius formed on a surface opposite to the guide portion and a second cam radius formed on a surface perpendicular to the first cam radius.

22. (original) The ink-jet printer of claim 21, wherein a curvature radius of the second cam radius is larger than that of the first cam radius.